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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,944	12/29/2000	Kent L. Leung	CISCP137/2014	7952

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EXAMINER	
HO, THOMAS M	

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/751,944	LEUNG ET AL.	
	Examiner	Art Unit	
	Thomas M. Ho	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11,12 and 14-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-9,11,12 and 14-25, 34-36* is/are allowed.

6)☒ Claim(s) *26-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment of 11/29/05 has been received and entered.

2. Claims 1-36 are pending. Claim 10 and 13 have been canceled.

Response to Arguments

3. Applicants arguments have been fully considered. The arguments are persuasive with regards to independent claim 1, as well as 34, 35, 36.

Applicant has argued with regards to the amended subject matter: "While the concept of a key used to generate a Foreign Home authentication extension is not novel, none of the cited references....discloses or suggests storing a key in a PPP profile. (page 16, paragraph 1)

The Examiner agrees, that while the concept of the use of a key for authentication is not novel, Malkin fails to disclose adequate support to place the key in the PPP profile. No motivation can be found to place the key in the PPP profile. Accordingly, the claim is held to be allowable.

Applicant's arguments with regards to the remaining independent claims 26 and 28 have been found to be unpersuasive:

The Applicant has argued on page 18, last paragraph

"However, Applicant notes that this portion of Malkin discusses agent advertisements transmitted by the Foreign Agent, not a registration packet transmitted by the Foreign Agent. Neither of the cited references, separately or in combination, discloses or suggests the claimed invention"

The Examiner, cited the deficiency of Malkin, not to indicated that Malkin failed to disclose the registration packet portion, but to indicate a lack of the specific identifier. It is clear that Malkin discloses the registration packet as was cited in the first part of the rejection. The Examiner sought to combine the mechanism of Mobile IP into the context of the registration process of Malkin.

Furthermore, it is noted that all PPP communications takes place in the form of "packets" thus, the registration request would be performed by packaging it as a packet as understood in the art.

Applicant has traversed the official notice taken by the Examiner with regards to the registration numbers, which Examiner has supported with the USPTO patent agent/attorney registration number. The Examiner contends that the element in question "a registration request packet" is simply a registration request in a digital form. A packet is simply the unit of network communication that is used. For example, all transmissions on the Internet are first placed in packets. A digital or online request to register as a patent attorney or agent or for the patent bar, would therefore read upon the sequenced "registration request packet".

Because of the prevalent use of packets as the principal vector of transmissions, and because any transmission through the PPP network would require the use of packets, the Examiner contends that registration numbers in registration packets are supported by the knowledge of the art as the common implementation of it. US patent 5751799, Mori, paragraph 132 demonstrates a particular implementation of this, as does US patent 5805702, Curry et al, paragraph 77.

In response to Applicant's traversal of official notice, the Examiner notes that any password system or any ATM system would disallow access if the authentication parameters didn't match with the ones on record, for example, accessing hotmail.

4. Claims 1-9, 11-12, 14-25, 34-36 are allowable.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malkin et al. and "Mobile IP: Design Principles and practices".

In reference to claim 26:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing a registration request packet composed on behalf of a node that supports the Point-to-Point protocol, comprising:

- Determining from the registration indicator whether to accept registration of the node with the Home Agent, where one of the registration indicators is whether the registration request was replied to within a predetermined amount of time, and is accepted if it is. (Column 5, lines 20-27)
- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted (Column 5, lines 28-35)
- Sending the registration reply packet to the Foreign Agent, where the sent packet is received by the Foreign Agent (Column 5, lines 28-35)

Malkin et al. fails to explicitly disclose

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) discloses

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent, where registration is an initial registration if the sequence number is zero, and is a re-registration if the sequence number is not zero.

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

In reference to claim 27:

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 26 further comprising:

indicating if the registration is initial or a re-registration, and is updated in the registration table with the rest of the information of the Mobility Agent Advertisement Extension. (page 45, Figure 3.3)

In reference to claim 28:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing Registration request packet composed on behalf of a node that supports the Point-to-Point Protocol, comprising:

- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted. (Column 5, lines 25-35)
- Sending the registration reply packet to the Foreign Agent. (Column 5, lines 25-35)

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) discloses

- Receiving the registration request packet from a Foreign Agent that is performing proxy registration on behalf of the node, the registration request packet including a sequence number indicating an order within the sequence of one or more registrations performed by one or more Foreign Agents on behalf of the node, where the packet includes the sequence number among other pieces of data. (Figure 3.3, Page 45)
- Determining from the sequence number whether to accept registration of the node with the Home Agent, where a registration is not accepted if no rebooting of the foreign agent occurs, for example in a rollover of the foreign agent because the registration is still the same registration. (Page 50, Section 3.5.2)

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

In reference to claim 29:
Malkin et al. (Column 5, lines 15-20) fails to explicitly discloses the method as recited in claim 1, further comprising:

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) reveals that one aspect of the Mobile IP protocol uses Sequence numbers to indicate a sequence number indicating the order of the transmissions of within a sequence of one or more transmissions that starts with the number zero, where the transmission type is an advertisement.

The Examiner furthermore takes official notice that giving a sequence number for a registration in order of registrations was well known at the time of invention. For Example, the patent office assigns registrations numbers to newly published patents in sequence as they are published. The

Examiner even notes that the Applicant's representative, Elise R, Heilbrunn even has a registration number 42,649 which occurs in sequence.

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. in order to sequence registration numbers, in order to quickly reference the registrations in a well organized fashion.

In reference to claim 30:

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) discloses the method as recited in claim 28, further comprising:

- Determining from the sequence number whether the registration request packet corresponds to an initial registration of the node with the Home Agent, where the registration is initial is the sequence number is zero.
- When the sequence number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, indicating in the registration reply that registration of the node with the Home Agent is accepted, where if the registration corresponds to the initial registration of the node the mobile node is re-registered.

In reference to claim 31:

"Mobile IP: Design Principles and practices" (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 30, further comprising wherein when the sequence

number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, incrementing the sequence number to create an updated sequence number, creating an entry in a mobility binding table associating the updated sequence number with the node, and providing the updated sequence number in the registration reply, where sequence number is incremented by one each subsequent time.

In reference to claims 32 and 33:

Both claims 32 and 33 specifically recite claim limitations that disclose a comparison of either a second sequence number to be compared or a second care of address to be compared with one that has been previously registered with the registration table or mobility binding table(also effectively a registration table)

"Mobile IP: Design Principles and practices" fails to explicitly disclose the

- When the data values(sequence number or care of address) to be compared are not equal to the ones found in the registration table, the registration reply packet is denied.
- When the data values(sequence number or care of address) to be compared are equal to the ones found in the registration table, the registration reply packet is accepted.

"Mobile IP: Design Principles and practices" (Page 78, Section 4.8.1) discloses that with regards to the mobility binding list, that the home agent is required to create or modify an entry regarding a Mobile Node's care of address and registration lifetime, such as that indicated in the format of the packet in (figure 3.3, page 45)

The Examiner takes official notice that it was obvious at the time of invention to deny an authentication or disallow full access, if one or more characteristics of a verification process were found to be unmatching.

Examples are Malkin et al. (Column 4, lines 15-20) and

"Mobile IP: Design Principles and practices" Page 79, Item 3 further indicates that during the validity checking process, if no foreign home extension is found, the home agent is required in the reply to reject the registration.

"Mobile IP: Design Principles and practices" Page 63, Item 133 also indicates that a registration by the foreign agent may be denied if there is a mismatch in the identification.
This method is also common to password and authentication processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to deny the registration reply packet if any information characteristics of a registration between a Home agent and a mobile node, including a sequence number and care of address, were found to be unmatching, in order to prevent mismatching registrations or registrations without the proper parameters from being allowed and consequently avoiding errors.

Conclusion

7. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (571)272-3838.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist Telephone: 571-272-2100 Fax: 703-872-9306
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TMH

September 17th, 2005

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